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Young-kook Kim

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EXAMINER

SALOMON, PHENUEL S

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/822,847	Applicant(s) KIM, YOUNG-KOOK	
	Examiner PHENUEL S. SALOMON	Art Unit 2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,9,19-24,27-29 and 31-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,9,19-24,27-29 and 31-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on November 28, 2007. Claims 1, 7, 19, 22, 27, and 35 have been amended; claims 5-6, 8, 10-18, 25-26, and 30 have been cancelled; claims 37-64 have been added claims 1-4, 7, 9, 19-24, 27-29, and 31-64 are pending.
2. The objection to claim 22 has been withdrawn pursuant to applicant amendment.
3. The rejection to claims 14-15 under 35 U.S.C. 112, second paragraph, as being indefinite has been withdrawn pursuant to applicant amendment.
4. The rejection of claims 1-5, 11-13,16 and 25 under 35 U.S.C. 102(e) as being unpatentable over Badger (US 5,973,664) has been withdrawn pursuant to claims amendment.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 (e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. Claims 27-34 are rejected under 35 U.S.C. 102(e) as being unpatentable over Bald et al. (US 6,744,259).

Art Unit: 2178

Claim 27: Bald discloses a method of indicating functions of buttons in an image display apparatus having a screen and a frame with the buttons, the method comprising:

generating one of first functions of a first button and one of second functions of a second button to be displayed on the screen (*at power up the system displays menu where a plurality of functions can be selected*) (col. 5, lines 36-42).

wherein the generating the one of the first functions comprises simultaneously generating each set of the first and second functions according to activation (*scrolling*) of one of the first and second buttons (*use of a scrolling display permits selection from among a greater number of options than they are softkeys*) (col. 5, lines 43-45).

Claim 28: Bald discloses the method as in claim 27 above, wherein each of the first functions and the second functions comprises one or more characters (as shown in fig. 3), and the generating of the first functions comprises displaying the characters in a direction in which the first and second buttons are arranged on the frame (*menu displays cursor control activated by softkeys 1 and 2 and select keys by softkey 3 and exit by softkey 4*) (col. 5, lines 36-44).

Claim 29: Bald discloses the method as in claim 27 above, wherein each of the first functions and the second functions comprises one or more characters (as shown in fig. 3), and the generating of the one of the first functions comprises displaying the characters in a direction having an angle (the keys and related functions form a zero degree angle) with an arrangement of the first and second buttons (*menu displays cursor control activated by softkeys 1 and 2 and select keys by softkey 3 and exit by softkey 4*) (col. 5, lines 36-44).

Claim 31: Bald discloses the method as in claim 27 above, wherein the generating of the one of the first

Art Unit: 2178

functions comprises displaying the one of the first functions and the one of the second functions on corresponding zones of the screen (fig. 3) and (col. 5, lines 36-44).

Claim 32: Bald discloses the method as in claim 27 above, further comprising: changing one of the first functions to another function corresponding to the first button to be displayed on the screen (*the menu permits user to select among four types of test function*) (col. 5, lines 42-44).

Claim 33: Bald discloses the method as in claim 27 above, wherein at least one of the first functions and the second functions is programmable (col. 4, lines 27-33).

Claim 34: Bald discloses the method as in claim 27 above, wherein the first functions and the second functions comprises at least one of menu, select, +, -, symbols. Arrow-up bold. or , a format of a signal source, and one of languages (fig. 1, items 1-4).

7. Claim 64 is rejected under 35 U.S.C. 102(e) as being unpatentable over Yu (US 6,757,034).

Claim 64: Yu discloses a method of controlling a display device having at least one of input unit positioned on a housing of the display device, the method comprising:

displaying at least one symbol on a screen, the at least one symbol indicative of a function to control the display device, the at least one symbol being assigned to the at least one input unit (fig. 3); and
controlling the function of the display device upon actuation of the at least one input unit (col. 3, lines 18-25), wherein the at least one symbol visually corresponds to at least one input unit (fig. 3, item 103), the at least one input unit is disposed near the at least one symbol (fig. 3, item 303), and the at least one input unit is disposed so as to be substantially flush with the surface of the screen fig. 3, item 201).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bald (US 6,744,259 B2) in view of Badger (US 5,973,664).

Claim 1: Bald discloses a method of indicating functions of buttons in an image display apparatus, the method comprising:

generating an image indicating functions assigned to the buttons (fig. 1, items 1-4); and
displaying the image on the image display apparatus, wherein the image is displayed at a position on the image display apparatus close to the buttons (*select displayed close to button 3*) (fig. 1, item 3), and wherein the displaying of the image on the image display apparatus further comprises: but does not explicitly disclose
detecting a pivot angle of the image display apparatus, and
displaying the image rotated according to the pivot angle.

However, Badger discloses a sensor, which determines the current physical orientation and signal the operating system to change the orientation mode to compensate for the rotation (col. 5, lines 26-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include pivot angle detection in Bald. One would have been motivated to do so in order to

Art Unit: 2178

accommodate the user with different orientation modes and providing the right image display for each alternative mode.

Claim 2: Bald and Badge disclose a method as in claim 1 above, Bald further discloses the image is text indicating the functions assigned to the buttons (fig. 1, item 3).

Claim 3: Bald and Badge disclose the method as in claim 2 above, Bald further discloses the language of the text can be selected by a user (col. 5, lines 36-44), [language could have been one of the options, since it is a technical equipment which can be used worldwide].

Claim 4: Bald and Badge disclose a method as in claim 2 above, Bald further discloses the image also includes symbols indicating at least one function assigned to at least one respective button (fig.1, item 1).

10. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Badger (US 5,973,664) in view of Bald (US 6,744,259 B2).

Claim 7: Badger discloses an image display apparatus comprising:

an image display unit (fig. 1, item 100a);

a graphics processing unit (video hardware) which supplies images displayed by the image display unit (col. 3, lines 49-51),

a pivot detector which detects a pivot angle of the image display apparatus and supplies pivot angle data to the graphics processing unit (col. 5, lines 25-31);

the graphics processing unit displays the image rotated according to the pivot angle (col. 5, lines 25-31), but does not explicitly disclose:

a controller which sets display parameters of the image display apparatus, has buttons for item selection, and performs operations assigned to the buttons; and

wherein:

the image display unit has zones to display an image indicating functions assigned to the buttons, and the controller generates image information to be displayed in the zones and supplies the image information to the graphics processing unit.

the zones to display an image, indicating functions assigned the buttons are displayed at a position on the image display apparatus close to the buttons, and

However, Bald discloses

a controller which sets display parameters of the image display apparatus, has buttons for item selection, and performs operations assigned to the buttons (*display screen controller that checks parameters associated with softkeys and displays functions assigned to the keys*) (col. 5, lines 46-62),

the image display unit has zones to display an image indicating functions assigned to the buttons, and the controller generates image information to be displayed in the zones and supplies the image information to the graphics processing unit and (fig. 1, items 1-4), (col. 5, lines 36-44)

the zones to display an image, indicating functions assigned the buttons are displayed at a position on the image display apparatus close to the buttons (fig. 1, items 1-4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included Bald's features in Badger. One would have been motivated to do so in order to accommodate the user with a wide variety of menu selections and providing the right image display for each alternative mode.

Claim 9: Badger, Kim and Bald disclose an apparatus as in claim 7 above, Bald further discloses the image indicating functions assigned the buttons is text indicating the functions assigned to the buttons (fig. 1, items 1-4).

11. Claims 19-23, and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bald (US 6,744,259) in view of Badger (US 5,973,664).

Claim 19: Bald discloses an image display apparatus having buttons to select items of a display, comprising:

- an image display unit including zones to display an image indicating functions assigned to the buttons; (fig. 1, items 1-4)

- a controller to set display parameters of the image display apparatus, to perform operations assigned to the buttons (col. 5, lines 46-62), to generate image information to be displayed in the zones (fig. 1, items 1-4) and to supply the image information to the graphics processing unit, (col. 5, lines 36-44), but does not explicitly disclose:

- a graphics processing unit to supply images displayed by the image display unit;

- a pivot detector to detect a pivot angle of the image display unit and to provide the pivot angle detected to the graphics processing unit such that the graphics processing unit supplies an image to the image display unit at a same pivot angle as the image display unit

However, Badger discloses

- a graphics processing unit to supply images displayed by the image display unit (col. 3, lines 49-51);

- a pivot detector (sensor) to detect a pivot angle of the image display unit and to provide the pivot angle detected to the graphics processing unit such that the graphics processing unit supplies an image to the image display unit at a same pivot angle as the image display unit (col. 5, lines 25-31). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

Art Unit: 2178

include graphics processing in Badger. One would have been motivated to do so in order to speed up the display process and provide the user with the right image display for each alternative mode.

Claim 20: Bald and Badger disclose the image display apparatus as in claim 19 above, Bald further discloses the zones are in a close corresponding relationship with the respective button (fig. 3, item 3).

Claim 21: Bald and Badger disclose the image display apparatus as in claim 19 above, but does not explicitly disclose the functions can be displayed in several different languages. However, Bald discloses use of a scrolling display permits selection from among a greater number of options than there are softkeys (col. 5, lines 36-44) [language could have been one of the options, since it is a technical equipment which can be used worldwide]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include language option in Badger. One would have been motivated to do so in order to make the apparatus much more adaptable to accommodate the user with different languages other than the inventor's.

Claim 22: Bald and Badger disclose the image display apparatus as in claim 19 above, Bald further discloses comprising:

a button discrimination unit the discriminate which button is pushed (col. 5, lines 46-50)

Claim 23: Bald and Badger disclose the image display apparatus as in claim 19 above, Bald further discloses the image is displayed when any one of the buttons is pushed (col. 5, lines 51-62).

Claim 35: Bald discloses an image display apparatus having a screen and a frame with at least one button, comprising:

a controller to set display parameters of the image display apparatus, to perform operations assigned to the buttons (col. 5, lines 46-62), to generate image information to be displayed in the zones (fig. 1, items 1-4) and to supply the image information to the graphics processing unit, (col. 5, lines 36-44), but does not explicitly disclose:

a graphics processing unit to supply images displayed by the image display unit;

a pivot detector to detect a pivot angle of the image display unit and to provide the pivot angle detected to the graphics processing unit such that the graphics processing unit supplies an image to the image display unit at a same pivot angle as the image display unit

However, Badger discloses

a graphics processing unit to supply images displayed by the image display unit (*video hardware that uses image information in memory to generate display signal*) (col. 3, lines 49-51);

a pivot detector (*sensor*) to detect a pivot angle of the image display unit and to provide the pivot angle detected to the graphics processing unit such that the graphics processing unit supplies an image to the image display unit at a same pivot angle as the image display unit (col. 5, lines 25-31). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include graphics processing in Badger. One would have been motivated to do so in order to speed up the display process and provide the user with the right image display for each alternative mode.

Claim 36: Bald discloses the image display apparatus as in claim 35 above, Bald further discloses the at least one function of the respective at least one button comprises first and second sub-functions, and the generating of the first and second sub-functions comprises selectively generating one of first and second sub-functions according to activation of the respective button (col. 5, lines 36-44).

Art Unit: 2178

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bald (US 6,744,259) in view of Badger (US 5,973,664) and in further view of Ruberry et al.(US 6,356,287 B1).

Claim 24: Bald and Badger disclose the image display apparatus as in claim 19 above, but do not explicitly disclose a second set of buttons, wherein when the image display unit is pivoted, the zones become in close corresponding relationship with the second set of buttons. However, Ruberry discloses a new orientation setting where the device repaints the displayed text using the new orientation (col. 12, lines 37-51). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include this feature in Bald. One would have been motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a rotated position.

13 Claims 37-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US 6,757,034 B2) in view of Kim (US 6,346,972 B1)).

Claim 37: Yu discloses a device for displaying an image, comprising:

a screen (fig. 3);

a housing having an opening and an outer border surface substantially surrounding the opening, wherein the screen is positioned inside the housing so as to be viewable through the opening (fig. 3);

at least one input unit being positioned on the housing, wherein the actuation of the at least one input unit allows controlling of a function of the display device (fig. 3, item 202); but does not explicitly disclose

a detector unit to detect whether the device is in a portrait mode or in a landscape mode,

wherein at least one symbol is displayed which is respectively assigned to the at least one input unit, and wherein the orientation of the at least one symbol is changed in accordance with the result of the detector unit.

However, Kim discloses

a detector unit to detect whether the device is in a portrait mode or in a landscape mode (*a pivot controller for outputting storing position control signals in response to pivot control signal*) (col. 5, lines 8-10), wherein at least one symbol is displayed which is respectively assigned to the at least one input unit, and wherein the orientation of the at least one symbol is changed in accordance with the result of the detector unit (col. 7, lines 51-55) and (fig. 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include Kim feature in Yu. One would have been motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a rotated position.

Claim 38: Yu and Kim disclose the device according to claim 37 above, Kim further discloses the detector unit detects the portrait mode or the landscape mode in response to a user rotating the screen (fig. 10).

Claim 39: Yu and Kim disclose the device according to claim 37 above, Yu further discloses the at least one symbol comprises at least one icon or text indicating a function of the display device (fig. 3).

Claim 40: Yu and Kim disclose the device according to claim 39 above, Yu further discloses the at least one symbol is configured to be displayed on the screen in a location that establishes a visually corresponding relationship between the at least one symbol and the at least one input unit (col. 3, lines 18-21).

Claim 41: Yu and Kim disclose the device according to claim 40 above, Yu further discloses the function includes a function to control display parameters of the display device (col. 3, lines 48-50).

Claim 42: Yu and Kim disclose the device according to claim 37 above, Yu further discloses, wherein the function includes a function to control display parameters of the display device (fig. 4, items 103 & 301).

Claim 43: Yu and Kim disclose the device according to claim 37 above, Kim further discloses the at least one input unit further comprises at least one of group comprising a set of horizontally arranged input keys and a set of vertically arranged input keys (col. 7, lines 51-61).

Claim 44: Yu and Kim disclose the device according to claim 37 above, Kim further discloses the at least one symbol is configured to be displayed horizontally and in an upright direction to indicate a respective position and function of the at least one input unit regardless of the portrait or the landscape mode of the display device (fig. 10).

Claim 45: Yu and Kim disclose the device according to claim 37 above, Yu further discloses the at least one symbol further comprises an OSD menu having selectable items to adjust the display parameters of the screen, and wherein the OSD menu is configured to be displayed distant from the at least one image (col. 2, lines 11-18).

Claim 46: Yu and Kim disclose the device according to claim 37 above, Yu further discloses the at least one input unit is a button (fig. 3).

Art Unit: 2178

Claim 47: Yu and Kim disclose the device according to claim 37 above, Yu further discloses the at least one input unit is positioned on the outer border surface which is substantially flush with the screen (fig. 5, items 22).

Claim 48: Yu discloses a method of controlling a display device having at least one of input unit positioned on a housing of the display device, the method comprising:

displaying at least one symbol on a screen, the symbol indicative of a function to control the display device, the at least one symbol being assigned to the at least one input unit (fig. 3); but does not explicitly discloses

determining a rotated state of the display device;

changing an orientation of the at least one symbol according to the determination of the rotated state of the display device; and

controlling the function of the display device upon actuation of the at least one input unit.

However, Kim discloses

determining a rotated state of the display device (*a pivot controller for outputting storing position control signals in response to pivot control signal*) (col. 5, lines 8-10);

changing an orientation of the at least one symbol according to the determination of the rotated state of the display device (fig. 10);

controlling the function of the display device upon actuation of the at least one input unit (col.6, lines 10-15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include Kim feature in Yu. One would have been motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a rotated position.

Art Unit: 2178

Claim 49: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the symbol is a text (fig. 3, item 303).

Claim 50: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the symbol is an icon (fig. 3, items 302).

Claim 51: Yu and Kim disclose the method as claimed in claim 48 above, Kim further discloses the determining of the rotated state of the display device determines the rotated state of the display device in response to a user rotating the screen of the display device (col. 6, lines 11-15).

Claim 52: Yu and Kim disclose the method as claimed in claim 51 above, Kim further discloses the rotated state is either a portrait or a landscape viewing state (fig. 10).

Claim 53: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the function includes at least one function to control a display parameter of the display device (fig. 4, items 103 and 301).

Claim 54: Yu and Kim disclose the method as claimed in claim 53 above, Yu further discloses the function includes one of contrast, brightness, and color control (fig. 4, item 301).

Claim 55: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the at least one symbol visually corresponds to at least one input unit (fig. 4, item 302).

Claim 56: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the at least one input unit is a button (fig. 3, item 102).

Claim 57: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the at least one input unit is positioned on the display device to be flush with the screen (fig. 3, item 201).

Claim 58: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the at least one input unit includes a plurality of input units (fig. 4, items 103 and 301).

Claim 59: Yu and Kim disclose the method as claimed in claim 48 above, Yu further discloses the at least one input units are buttons (fig. 4, item 103).

Claim 60: Yu and Kim disclose the method as claimed in claim 48 above, Kim and Yu further disclose the at least one input units includes a plurality of input units disposed in one of a vertical direction and a horizontal direction (fig. 10 and 3) respectively.

Claim 61: Yu and Kim disclose the method as claimed in claim 48 above, Kim further discloses the changing of the orientation of the at least one symbol comprises rotating the symbol substantially 90 degrees (fig. 10).

Claim 62: Yu and Kim disclose the method as claimed in claim 48 above, Kim further discloses the respective assignment of the displayed at least one symbol to the at least one input unit remains the same even though the at least one symbol is rotated (col. 7, lines 51-61).

Claim 63: Yu discloses a method of controlling a display device having at least one of input unit positioned on a housing of the display device, the method comprising:

displaying at least one symbol on a screen, the symbol indicative of a function to control the display device, the at least one symbol being assigned to the at least one input unit (fig. 3); but does not explicitly disclose

changing an orientation of the at least one symbol in accordance with an information indicative of a viewing state of the screen, in which the viewing state relates to a rotated state of the screen; and

controlling the function of the display device upon actuation of the at least one input unit.

However, Kim discloses

changing an orientation of the at least one symbol in accordance with an information indicative of a viewing state of the screen, in which the viewing state relates to a rotated state of the screen (col. 7, lines 51-55); and

controlling the function of the display device upon actuation of the at least one input unit (col. 7, lines 58-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include Kim feature in Yu. One would have been motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a rotated position.

Response to Arguments

14. Applicant's arguments filed on 11/28/2007 have been fully considered but they are not persuasive.

With respect to claim 1, applicant arguments are moot in view of new ground of rejection (s).

With respect to claim 27, applicant argues:

Neither Bald et al. nor Badger disclose or teach, either separately or combined, "wherein the generating of the one of the first functions comprises simultaneously generating each set of the first and second functions according to activation of one of the first and second buttons,"

In response, examiner respectfully disagrees and notes that Bald discloses wherein the generating the one of the first functions comprises simultaneously generating each set of the first and second functions according to activation (*scrolling*) of one of the first and second buttons (*use of a scrolling display permits selection from among a greater number of options than they are softkeys*) (col. 5, lines 43-45).

With respect to claims 7, 19, and 35, applicant argues:

Bald et al. does not teach or suggest, among other things, "a pivot detector which detects a pivot angle of the image display apparatus and supplies pivot angle data to the graphics processing unit, wherein: the image display unit has zones to display an image indicating functions assigned to the buttons, and the controller generates image information to be displayed in the zones and supplies the image information to the graphics processing unit, the zones to display an image indicating functions assigned the buttons are displayed at a position on the image display apparatus close to the buttons, and the graphics processing unit displays the image in the zones rotated according to the pivot angle,"

In response, examiner respectfully disagrees and notes that Badger teaches a pivot detector which detects a pivot angle of the image display apparatus and supplies pivot angle data to the graphics processing unit (*a sensor, which determines the current physical orientation and signal the operating system to change the orientation mode to compensate for the rotation*) (col. 5, lines 25-31), the

graphics processing unit displays the image rotated according to the pivot angle (col. 3, lines 49-51) (col. 5, lines 25-31) and Bald discloses

a controller which sets display parameters of the image display apparatus, has buttons for item selection, and performs operations assigned to the buttons (*display screen controller that checks parameters associated with softkeys and displays functions assigned to the keys*) (col. 5, lines 46-62),

the image display unit has zones to display an image indicating functions assigned to the buttons, and the controller generates image information to be displayed in the zones and supplies the image information to the graphics processing unit and (fig. 1, items 1-4), (col. 5, lines 36-44)

the zones to display an image, indicating functions assigned the buttons are displayed at a position on the image display apparatus close to the buttons (fig. 1, items 1-4). Therefore, it would have been obvious to combine Bald and Badger in order for an artisan to arrive to the applicant claimed invention

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a. Kim (US 6,346,972 B1) discloses video display apparatus with on-screen display pivoting function.
 - b. Barrus et al. (US 7,002,604 B1) discloses screen rotation.
 - c. Tang et al. (US 6,765,577 B1) discloses apparatus and method for rotating on-screen display fonts.
 - d. Kimura (US 7,167,729 B1) discloses portable electronic apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phenuel S. Salomon whose telephone number is (571) 270-1699. The examiner can normally be reached on Mon-Fri 7:00 A.M. to 4:00 P.M.(Alternate Friday Off) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272 4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/822,847
Art Unit: 2178

Page 21

2/29/2008

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